W. B. Hodge Esq.
with the Author's kind regards.

ACTUARIAL SEMINAR

FACTS AND FALLACIES

CONCERNING

Life Assurance Companies,

ILLUSTRATED BY

DIAGRAMS.

BY

F. ALLAN CURTIS,

Fellow of the Institute of Actuaries of Great Britain and Ireland, &c., &c., &c.

"There is no falsehood on the face of the earth so dangerous as truth—when that truth comes distorted, placed in wrong order, or laid in false proportions."

VAUGHAN.

LONDON:
RIXON AND ARNOLD,
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FACTS AND FALLACIES

CONCERNING

Life Assurance Companies.

CHAPTER I.

"All Englishmen like to treat matters practically and look things plainly in the face."—*Times.*

The Life Assurance world has recently been very seriously disturbed by apprehensions of the possible insolvency of certain companies.

Fear makes no distinction, and the business of Life Assurance has been much affected by the general alarm that has been created. But as it is "an ill wind that blows nobody any good," this commotion in the Life Assurance world will probably be beneficial in the end.

My present object is to show that for the most part the Assurance Offices are in a healthy condition, and that with regard to Life Assurance Companies, it is much more difficult to arrive at a sound conclusion than is generally supposed. The subject is a very complex one, and presents many points for consideration which are essential parts of the case.

The accounts furnished to the Board of Trade by the Life Assurance Companies contain a vast amount of data upon which a professional actuary may go to work, and determine pretty closely the true financial condition of a company.

P 42602

But the unprofessional assured cannot be expected to enter upon an investigation requiring much labor, experience, and technical knowledge. The assured wants a rough and ready rule by which he may ascertain at once what he chiefly desires to know: Is the company safe in which he is insured?

Some actuaries have suggested empirical methods for determining the soundness of a company; but, so far as I am aware, not one of them has proposed a method that would answer the purpose for all companies alike. The public have caught at their suggestions as a drowning man would clutch at a straw, and with no better result.

A specific for all diseases has not yet been discovered, nor does there exist any simple, rough, and ready rule by which alone the financial status of a Life Assurance Company can be determined.

The mechanism of Life Assurance is very intricate, and requires thoughtful study and a fair amount of practical experience before it can be well understood. And no proper judgment is possible without a clear understanding.

The Lord Chancellor would be little "au fait" in clinical practice, and a physician would be ill at ease on the woolsack. Both law and physic require study and practice of a special character, and not the less so does the science of Life Assurance. A long course of special training and practical experience can alone mature the judgment in each case.

But intricate as the subject of Life Assurance is, and almost incomprehensible to those whose minds have not been trained in the modes of thought necessary to its understanding, the matter presents no difficulty whatever to the professional actuary, who, familiar with the mechanism, can analyse its parts.

The compulsory publication of accounts under the Life Assurance Companies Act, 1870, dispelled much of the doubt formerly entertained regarding certain old Assurance Companies, who till then had wrapped up the state of their affairs in the most impenetrable mystery.

Free discussion, founded upon those accounts, will throw still further light upon the situation of the Life Offices generally; but the discussion would be worthless if confined to persons who, having no practical knowledge of the subject, can only offer to the world the offspring of their own fancy, whose propositions have in them just enough substratum of truth whereon to weave a plausible tale, and no more.

To be of value, the discussion must be conducted between men well versed in the subject; in its theoretical as well as in its practical bearings; whose expressions, though tinged with the colours of their own experiences, are yet the expressions of men well qualified to speak. There is a responsibility in silence as well as in speech; to remain silent now would be to avoid the performance of a plain duty to the public. As a professional man of many years' experience in Life Assurance Companies, I discharge my responsibility in the matter, by offering to the public a few suggestions which I trust may be of use to them.

It will be my endeavour in the following pages to place the subject of this pamphlet very plainly before my readers, so that they may be in a position to arrive at sound and practical conclusions.

CHAPTER II.

"Facts are always right; but the deductions from them are frequently wrong."—BUNYAN.

NOT many months ago there appeared in the *Times* newspaper a letter written by a professional actuary under the ominous title of "The Insolvent Life Offices."

The English are as a rule a provident people, and, being so, have insured their lives in some one of the many Life Assurance institutions of which this country is justly proud. The sound of the "tocsin" could not have filled the hearts of the community with greater apprehension than did such a suggestion of the possibility of insolvency amongst the Life Offices, and the effect of such an announcement has acted to the disadvantage of many a meritorious and well-conducted office: for Life Assurance business, which more than any other is dependent on good faith, cannot thrive under the influence of distrust.

It may be a fact that amongst the 121 Life Offices, great and small, in this country, there are some whose affairs have not been conducted with the prudence and skill required for the good management of institutions of this nature; but it would be a fallacy to suppose that the number of such companies is great, or that they are of sufficient calibre to throw much weight into the scale. The alarm excited in the public mind with regard to the financial position of the majority of the life assurance offices is without foundation.

The alarm having been sounded, it was to be expected that many persons would rush to the front with their nostrums and advice, and so they did, a motley crowd. Of course, many knowing little of the sub-

ject, expressed decided opinions, and others, though knowing much, only wrote fiddle-faddle, neither wholesome advice nor sound instruction, but decidedly mischievous, because the public were led to seek the truth in a wrong direction.

I will explain this by a few examples:—

An actuary gravely advises those who wish to assure how to choose an office. Select, he says, an office which has an assurance fund of not less than one million sterling, and that does not spend more than 10 per cent. of its premium income. Here the public are asked to conclude that a company not having realised assets to that amount, and spending more than one-tenth of its premium income, is not a company that prudent people should assure in: and as this curious piece of advice is offered at a time when the insurance world is in great excitement about insolvent offices, it may be understood as a euphemistic warning that offices not reaching this standard are amongst a proscribed lot.

It may be a fact that the company with which that actuary is connected has an assurance fund of one million sterling; and another fact that its expenditure does not exceed one-tenth part of the premium income; and it may also be a fact that that company is financially sound: but to argue that those data alone were sufficient to determine the soundness of the company would be to argue falsely and mislead the public as to what constitutes soundness.

It is not unusual for companies of very old standing to parade the fact of the large assurance funds which they possess, while they conceal the fact of the age of the assurances which renders such large funds necessary. The public are saved the trouble of calculating, and are told that *this* company has an

assurance fund of say 40 per cent. of the sums assured, while *that* company has not even 20 per cent. of the sums assured. What other inference are the public invited to draw, but that the one company is stronger than the other? The fact of the ratios is of course right, but the suggested inference may be wholly wrong.

Of precisely the same character is the so-called comparative test of the amount of premium income in hand; and the argument sought to be drawn from it is equally fallacious. For it is obvious that both the nature of the assurance risk, and the length of time during which the policies have been in force, must be known, before a correct estimate can be made; and as it is quite certain that there are very few companies of the same age, and very few who transact business in precisely the same way amongst the same class of people and for the same amount, it follows that many other circumstances have to be considered before a fair comparison can be established between one company and another.

Some companies make a merit of spending very little money for the acquisition of new assurances, and impute extravagance to those companies which spend liberally to give greater extension to their business. The true test of excellence on the score of expenditure is not how little is spent but what is the beneficial result of outlay. Judicious liberality may prove to be the best economy.

Other companies which spend freely are naturally well satisfied with the enormous return which they obtain for their outlay and energy. If big figures mean heavy responsibilities they mean also large resources to meet them. If the management be prudent and skilful there is great advantage in big

figures, for being less disturbed by passing events, the course of affairs is more even and the management more easy and certain. Except in this respect, it would be a fallacy to argue that a colossal business is an element of either weakness or of strength.

Large bonuses are considered by some persons to be a test of superiority. If they are the result of excellent management, then unquestionably large bonuses constitute a good argument in favour of a company, but it may happen that they are the exponent of onerous conditions of assurance, by which some of the assured suffer to benefit others.

It will not be possible in a brief sketch like the present to enter fully into so complex a matter, but I will put the subject in such a way as to indicate the bearing of some of the principal points. I propose to do this by placing in juxtaposition such elementary data as may be correctives, so that the reader may have a broader view of the case. I shall consider the subject under four heads:—

1.—The rate of expenditure, compared with the average duration of the assurance business.

2.—A hypothetical reserve fund based upon that average duration compared with the reserve fund actually made.

3.—The amount of reserves actually made, compared with the amount of premium received.

4.—The increase or decrease of the assurance fund compared with receipts.

CHAPTER III.

Who cultivates his field with liberal hand
Will reap a plenteous harvest from the land.
ANON.

SOME of my readers may remember the time when pigtails were fashionable, and how, when the fashion had changed, and pigtails were no longer "de mode," some old people persisted in wearing this oddest of all personal adornments.

In much the same sort of way some of our old Life Assurance Offices adhere to the customs of former days. Having formed their connections at a time when there was little or no competition, and when business could be obtained without difficulty and at small cost, they adhere to their former mode of proceeding and will not fall-in with modern ways that experience has shown to be judicious and even necessary for the extension of Life Assurance among the people.

The good old days, when proposers for assurance were willing to pay not only the premium but the medical fee, and the policy stamp, and an entrance fee besides, for the privilege of being assured—those good old days are past and gone, never to return. The world has moved-on. One by one these elements of economy to an office have been conceded to the assured; the office charges no entrance fee and now bears the cost of the medical fee and the policy stamp, and, beyond this, the competition of the present day has rendered the co-operation of agents necessary. There was a time when a man entered a life office and took out a policy because his friend or neighbour had done so, and persuaded him to do the same; then to stimulate the growth of life assurance, some companies

appointed men of respectability in country towns to do a little business by way of agency, in addition to their regular business, and paid them a small commission for their trouble; but now many thousands of men make Life Assurance agency the business of their lives; such men must be fairly remunerated for their toil, and this constitutes a necessary element of expenditure. These are the men who cause Life Assurance business to flourish; without them it would languish and sink into the meagre condition disclosed in the accounts of the so-called economical offices. These are chiefly offices of very old standing. The business they now have was mostly obtained when it could be acquired at little cost. These companies do not keep pace with the times, and it does not occur to the managers of those antiquated institutions that a company guided by the experience of the past, and having such abundant resources as probably none but Life Assurance Companies can command, can make arrangements which shall be for the ultimate advantage of the assured. The old companies disapprove new-fangled ways, and they stigmatize as extravagance that which is in truth, liberal and judicious expenditure. Parsimony is not economy. An assurance company is not the better for starving its business.

If a low rate of expenditure be attended with a large accession of new business year by year, the office must be well managed and thrifty; but if the low rate of expenditure goes side by side with scarcely any new business, then the office is simply on the decline, and will become extinct at a period more or less remote.

If a high rate of expenditure be unattended with corresponding results in new business, the office cannot be managed properly; but if attended with a large new premium income, then there is good ground for

believing that the company is managed with energy and skill; and the high rate of expenditure at first may prove to be the best economy in the end.

Within certain limits it may be held that a very low rate of expenditure indicates a feeble power to replace by new policies those which become extinct by death, surrender or otherwise, and that a liberal rate of expenditure leads to the supposition of high recuperative power.

This expression will be found to be borne out tolerably well by a diagram showing the premium income and expenditure of 61 offices mentioned in "White's Insurance Register" for 1873, which have supplied information as to their new premium income.*

The diagram is divided into 100 parts, with numbers at the top and bottom for each successive division of 5 parts, to facilitate counting.

The offices are arranged in the order of the average duration of the assurances, as shown by the dotted line, which cuts off as many of those parts as represent the number of years that upon an average the policies have been in force.

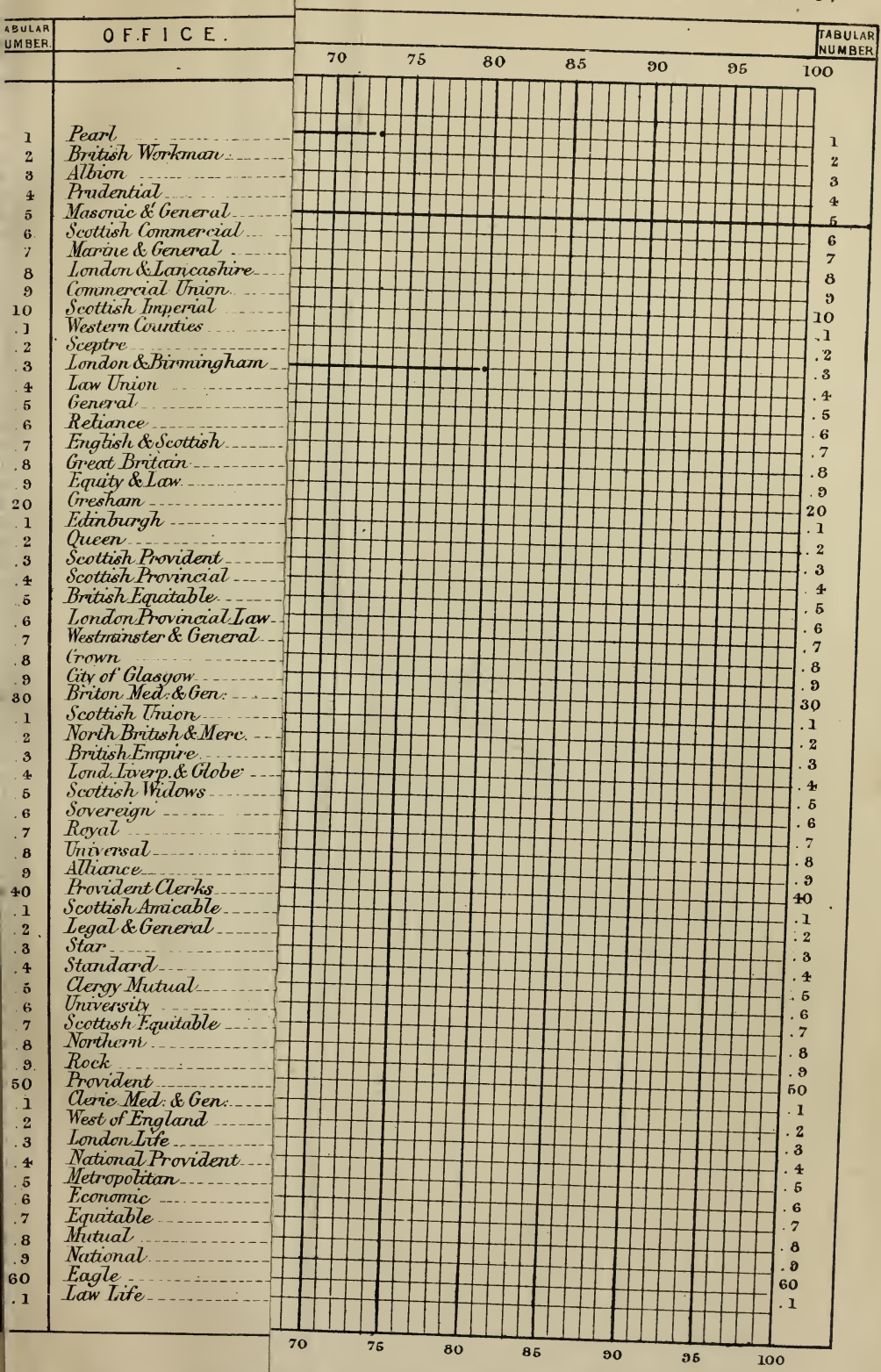
The thick line drawn from left to right indicates, at the place of the dot at the end, the number of 100 parts of the premium income which have been spent, for it stretches out to as many divisions.

The leading idea expressed in this diagram is, that as the average age of the business *increases* the ratio of expenditure *diminishes*.

This diagram will shew at a single glance the tendency of the proportion of expenses to premium

* There are 61 Companies (besides those mentioned in the diagram) which have not supplied particulars of their new premium income, many of them are very old offices.

DIAGRAM 1. *Imated Average duration of the Assurances.*



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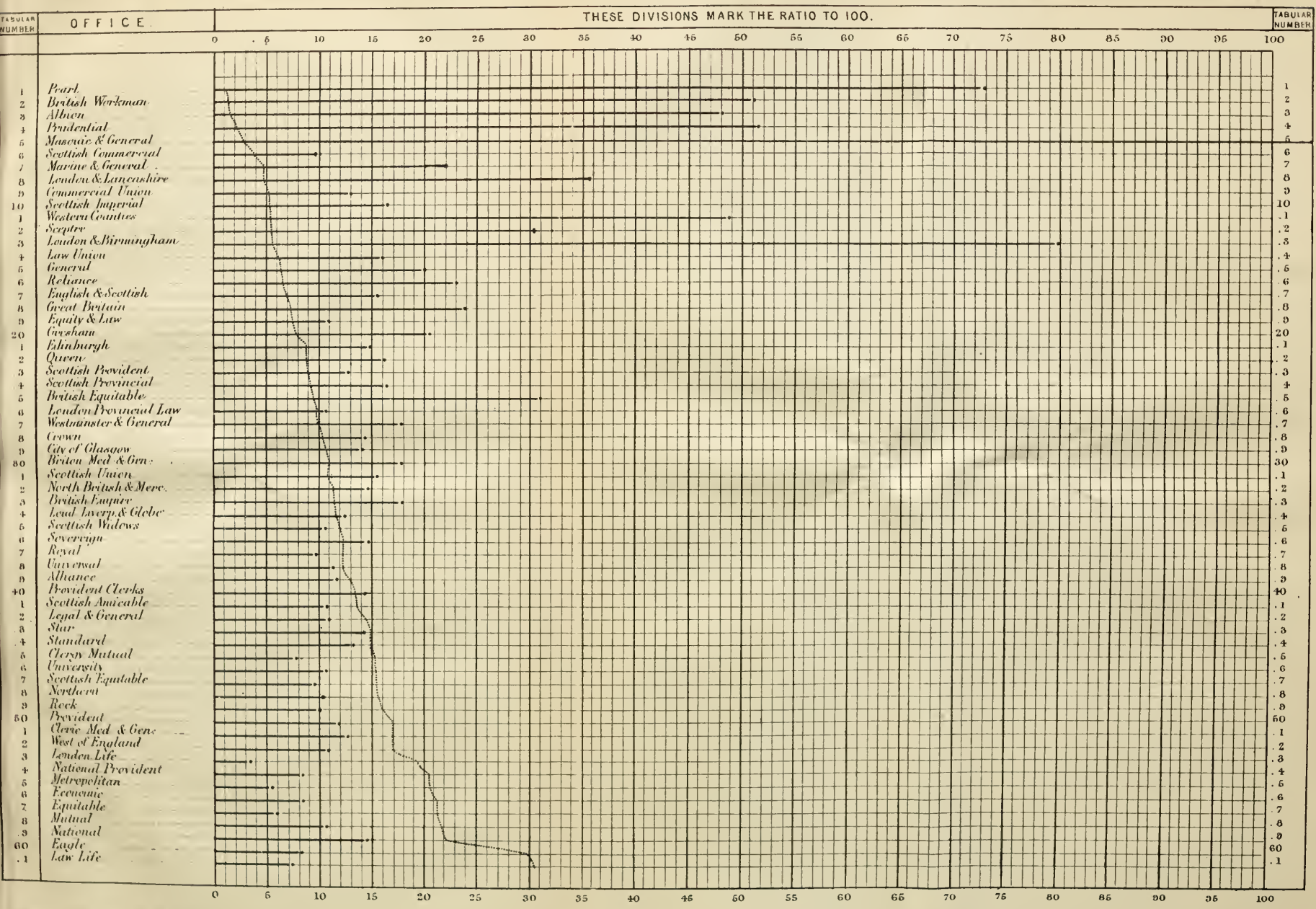
ber of the divisions crossed by the dotted line to
atio of Expenses to Prem ears, and the expenses of management appear by the
th a dot to be 11 per Cent of the Premium Income

DIAGRAM 1. *The Ratio of Expenses of Management to the Premium Income compared with the estimated Average duration of the Assurances.*



Average duration of Assurances .....

Ratio of Expenses to Premium Income _____.

Example. *N° 19 "Equity & Law" The average age of the business appears from the number of the divisions crossed by the dotted line to be about 7½ years, and the expenses of management appear by the line ending with a dot to be 11 per Cent of the Premium Income.*

income to be low if the average age of the policies is high. The reason is probably that where little or nothing is spent with a view to the extension of the business, very few new policies are effected to replace those that are discontinued from death or from other causes, therefore the average age of the business grows rapidly older.

But where money is expended for the extension of the business, and a large amount of new policies is obtained, the effect of the large accession of new business is to retard the increase of the average age of the policies, and even to reduce it, if the growth of the Company be rapid as compared with past years.

The average age of the policies has been estimated by finding the proportion which the amount of the premium income bears to the new premiums, as reported in "White's Register" for 1873. This method appears to me the most likely to give the duration we require, at any rate within limits sufficiently near for the purpose of a general comparison.

As an instance that the general tendency of expenditure is high if the policies are young and low if the policies are old, I refer to No. 4, The Prudential, and No. 61, The Law Life. The expenditure of The Prudential is represented as about 51 per cent. of the premium income; but then the estimated average age of the policies is only two years, whereas The Law Life Office spends 7 per cent. only of its premium income, but again the estimated average age of the policies is about 30 years.

The following Table, corresponding with the foregoing diagram, contains the elementary data upon which the diagram has been constructed.

TABLE I.—Showing the proportion of total Premium Income to the *new* premiums, and thereby the approximate average duration of the assurance risks; showing also the ratio of expenses to the Premium income.

Numerical order.	Company.	Total Premium Income.	New Premiums.	Estimated average duration of Risk.	Proportion of Expenses to Premium Income.
		£	£		
1	Pearl	9,343	8,516	1.1	72.9
2	British Workmen	4,698	3,630	1.3	51.
3	Albion	7,665	5.090	1.5	48.1
4	Prudential	309,888	148,904	2.1	51.5
5	Masonic and General	2,912	1,090	2.7	103.5
6	Scottish Commercial	4,569	1,220	3.7	9.9
7	Marine and General	30,840	6,754	4.6	22.
8	London and Lancashire	28,409	6,209	4.6	35.8
9	Commercial Union	71,074	14,038	5.1	12.9
10	Scottish Imperial	10,208	1,965	5.2	16.5
11	Western Counties	10,193	1,918	5.3	48.7
12	Sceptre	17,906	3,298	5.4	30.2
13	London and Birmingham	2,681	480	5.6	30.
14	Law Union	48,012	7,932	6.1	16.
15	General	64,508	10,124	6.4	20.
16	Reliance	65,673	10,064	6.5	23.1
17	English and Scottish	101,981	14,498	7.0	15.4
18	Great Britain	59,494	8,097	7.3	23.9
19	Equity and Law	96,754	12,703	7.6	10.8
20	Gresham	362,387	46,525	7.8	20.5
21	Edinburgh	108,032	12,289	8.8	14.7
22	Queen	39,212	4,468	8.8	16.3
23	Scottish Provident	206,249	23,243	8.9	12.8
24	Scottish Provincial	103,197	11,190	9.2	16.5
25	British Equitable	91,534	9,820	9.3	31.
26	London and Provincial Law	79,978	8,251	9.7	10.3
27	Westminster and General	39,413	4,019	9.8	17.8
28	Crown	127,443	12,537	10.2	14.4
29	City of Glasgow	110,731	10,405	10.6	14.
30	Briton, Medical & General.	220,344	20,191	10.8	17.8
31	Scottish Union	146,207	13,520	11.2	15.6
32	North British & Mercantile	284,879	24,888	11.4	14.7
33	British Empire	84,440	7,363	11.5	17.9
34	London, Liverpool & Globe	256,743	22,178	11.6	12.3
35	Scottish Widows	444,383	33,976	11.8	10.7
36	Sovereign	69,547	5,704	12.2	14.4
37	Royal	223,874	18,247	12.3	9.6
38	Universal	123,858	9,961	12.4	11.3
39	Alliance	90,395	6,958	13.0	11.7
40	Provident Clerks	65,306	4,823	13.5	14 3
41	Scottish Amicable	154,161	11,309	13.6	10.8
42	Legal and General	125,658	8,677	14.5	11.
43	Star	149,476	10,107	14.8	14.1
44	Standard	536,899	36,369	14.8	13.1
45	Clergy Mutual	160,170	10,563	15.2	7.8
46	University	52,525	3,439	15.3	10.6
47	Scottish Equitable	180,770	11,656	15.6	9.5
48	Northern	119,931	7,584	15.8	10.2
49	Rock	147,786	9,199	16.1	10.
50	Provident	155,146	9,157	16.9	11.7
51	Clerical Medical	166,618	9,851	16.9	12.8
52	West of England	117,256	6,893	17.0	10.9
53	London Life	275,546	14,405	19.1	3.4
54	National Provident	242,089	11,842	20.4	8.6
55	Metropolitan	134,280	6,594	20.4	5.2
56	Economic	223,405	10,500	21.2	8.6
57	Equitable	145,111	6,786	21.4	5.9
58	Mutual	76,243	3,492	21.8	10.7
59	National	62,529	2,813	22.2	14.4
60	Eagle	290,522	9,791	29.6	8.3
61	Law	266,544	8,773	30.4	7.3

CHAPTER IV.

"Regard the world with cautious eye,
Nor raise your expectation high;
See that the balanced scales be such,
You neither fear nor hope too much."

COTTON.

THE fact of a large assurance fund is in itself no evidence of the soundness of a company. To determine the importance of the fact, it must be viewed in its relation to other circumstances; otherwise we may have an undoubted fact upon which may be based an unquestionable fallacy.

Thus it has been stated that if an office has one million sterling in hand as a reserve fund, and does not spend more than 10 per cent. of its premium income, the office may be considered deserving the confidence of the public. The public would, therefore, infer that an office not having reserved one million sterling does not merit confidence. But amongst the 61 offices mentioned in Table I. there are only 22 offices which in 1873 possessed as much as a million sterling, and of the many others that had not an assurance fund equal to one million, there are many which had much less, yet are undoubtedly sound and excellent offices.

The mere figures of an assurance fund are of no value to determine the question; they must be taken in connection with the amount of the sums assured, the duration of the risks, the nature of those risks, and many other circumstances.

Let it be granted that the Company A has a reserve of 50 per cent. of the sum assured, while B has only 20 per cent. in hand. Let it be also granted that the reserves made are relatively equal, considering the risks they have to cover.

A statement to the effect that A had 50 per cent. in hand and B only 20 per cent., would in itself be true, yet in its application it might be made to support an untruth; for if the case be put in such a way as to lead to the inference that A is much better able to meet its engagements than B, such a statement of the case would be unwarrantable.

Truth would require a further statement explanatory of the difference, such as:—that the policies of A were older than those of B, or were of a nature to require higher reserves than those of B, such as tropical climate risks, endowments, and so forth, making the reserves relatively equal, because by the proposition they are equal.

The bare statement that A has 50 per cent. of its sums assured, and B only 20 per cent., if made *alone*, and under circumstances that would lead people to infer that the policies of the companies were in other respects equal, would imply an untruth. For the natural inference would be that the smaller reserve, in proportion to the sums assured, indicates less security to the policyholders. So that putting forward the statement of A's greater reserve, as witnessing to greater security in Company A, would be a mode of comparison leading to false conclusions.

Hence the comparative statement of the proportion of the reserve to the sums assured, without any statement of the other conditions of the case, is worthless and misleading, and cannot be accepted as a test of security.

Yet this is what some people, without sufficient reflection, accept as a fair way of looking at the position of one company as compared with another, simply because they are not familiar with the subject, and cannot readily detect the fallacy lurking in the case as put to them.

The comparison of the reserves made for two policies, or two groups of policies, can only be a just comparison provided these policies are in like conditions in every respect. That is to say, for the comparison to be good, the policies must be:

1. Of the same nature of assurance.
2. Of the same average duration as current risks.
3. Upon the lives of persons of the same average age.
4. Also living under the same condition of climate, chargeable with the same rate of premium.

Otherwise the comparison must fail.

Having already determined the average age of the policies in each company, I shall for the present assume that they are all ordinary Whole Life assurances without participation in profits, and that the assured entered at the age of 36, which is commonly found to be the average age of the assured at entry, taking them all together. Then employing the Carlisle Table of Mortality, and reckoning 3 per cent. interest, I shall calculate the reserves required under that hypothesis, and compare them with the reserves actually made. By this means we shall have a base line upon which to draw our conclusions.

Let it be well understood that this is only a tentative process, but we shall be led by it a step further in our endeavour to arrive at a knowledge of the true position of the several companies we are considering.

The 61 companies mentioned in the first diagram are introduced in the same order in the one now following.

The zig-zag line, which represents the amount of reserve supposed to be necessary for the assurance risks, seems to take a middle course between the points which indicate the amount of the reserve actually made by the several companies, some of the thick reserve-lines stretching beyond the hypothetical line (zig-zag), and others not reaching so far.

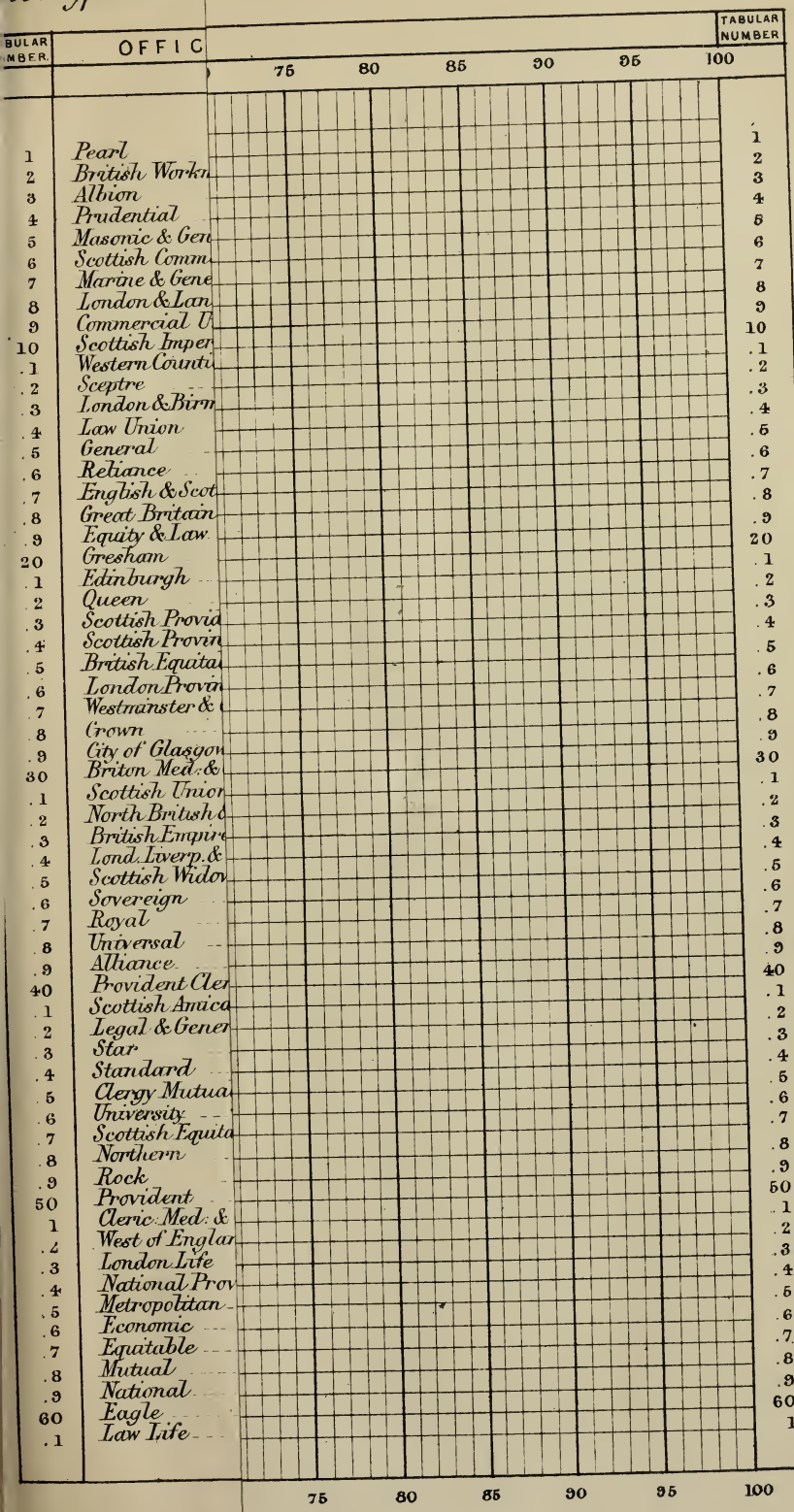
We must not imagine excessive caution in some companies, and deficient caution in others.

The companies shown to have reserves beyond the measure supposed to be requisite, have, in all probability, risks which involve the necessity for greater reserves. The excess may arise from several causes:—From the value of business of a nature not provided for in the calculation of the "hypothetical" reserve; from the annuity fund being included in the assurance fund; from assurances other than Whole Life assurances, involving the necessity for high reserves, such as Endowment assurances or Endowments, Joint Life assurances, limited premiums, tropical climate risks, and so forth, besides the value of the bonus additions, which are by no means an unimportant item amongst the older offices. On the other hand, the apparent shortcoming of the reserve may be due to assurances—such as Contingent assurances, Short Terms, and the like, not involving the necessity for such high reserves as for Whole Life assurances. No fair comparison can be made between the several companies until all these conditions have been duly considered and weighed.

A company, having a reserve of 25 per cent. of the sum assured, may be in just as good a condition relatively as a company having 50 or more per cent.

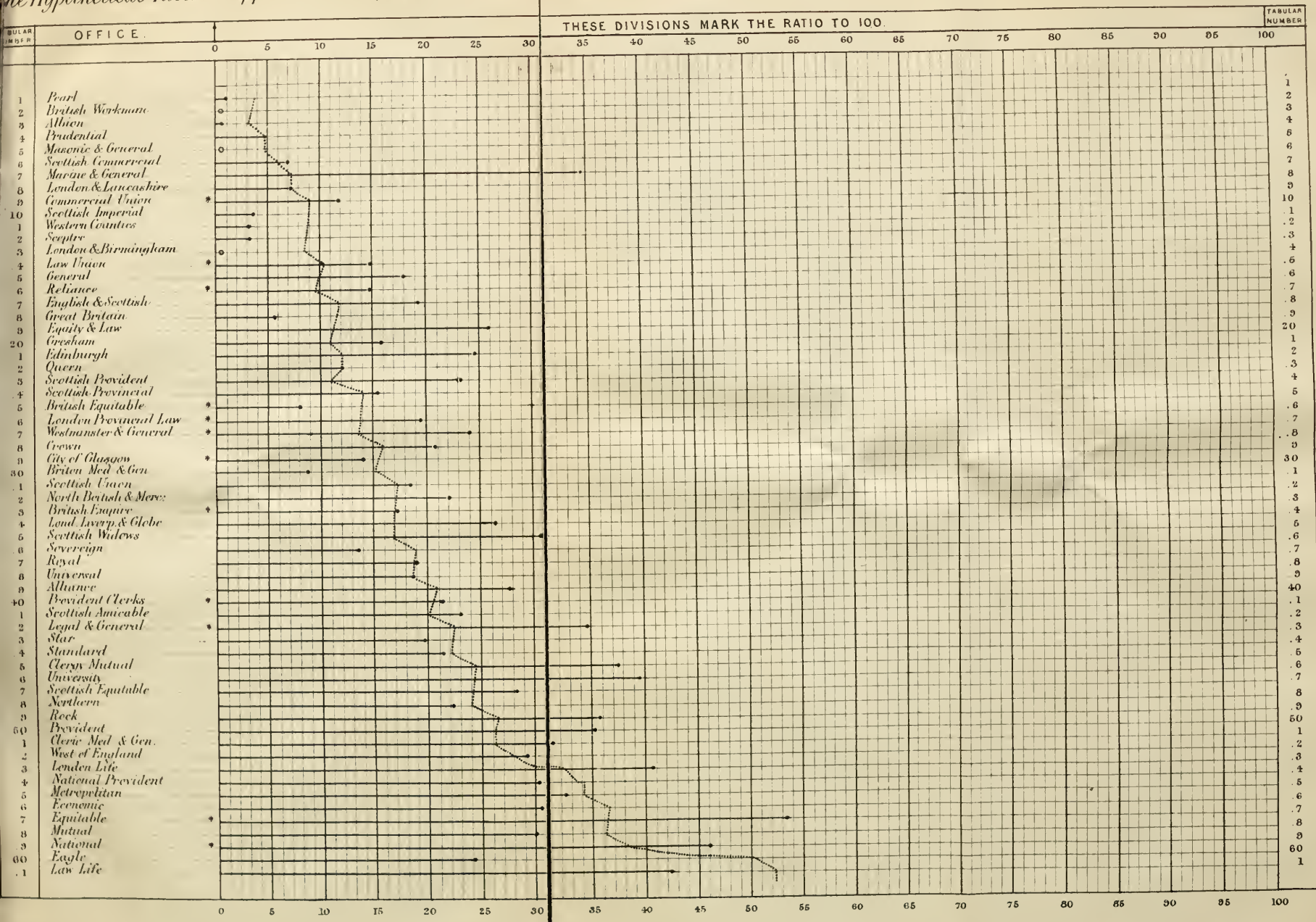
Take, for instance, the Equitable, No. 57, which has a reserve fund of nearly 54 per cent. of the sums

DIAGRAM *Sums Assured compared with the Hypothetic*



Assurance Funds Universal has an Assurance Fund equal to
Hypothetical Reserv of the Sums Assured and the Hypothetical
** These Companies uires the same Amount*

DIAGRAM 11. *The Assurance Funds of the several Companies reduced to a per centage of the Sums Assured compared with the Hypothetical Reserve supposed to be required for an Assurance of £100.*



Assurance Funds ———————

Hypothetical Reserve .....

* *These Companies have combined the Annuity Fund with the Assurance Fund*

Example. *N° 38 The Universal has an Assurance Fund equal to 19 per Cent of the Sums Assured and the Hypothetical Reserve requires the same Amount*

assured, and the Equity and Law, No. 19, which has only 26 per cent., or less than half the proportion of the Equitable; it may be that the Equity and Law is relatively richer than the Equitable, for the average age of the Equitable policies is evidently very much greater than those of the Equity and Law, the former having apparently an average age of more than twenty years, while the latter have not even ten years' duration. Again, the assurance fund of the Equitable covers the reserve for annuities, while that of the Equity and Law does not; and, further, the bonuses of the Equitable have, from the great age of the company, accumulated to a greater extent than the bonuses of the Equity and Law; consequently, the Equitable ought to make a higher reserve, in proportion to the sums assured, than the Equity and Law would have to do.

An attentive examination of the diagram will show that there are twice as many offices which have assurance funds greater than the hypothetical reserve required, than there are offices whose assurance funds fall short of it; and of those that fall short of it, one half at least are offices respecting the solidity of which there cannot be the remotest doubt, and as for the remainder, they are for the most part offices of such small calibre that their concerns can have no influence on the general question. So far as this diagram can be accepted as bearing upon the case, the public may see that there is no ground for alarm.

It must always be borne in mind that an Assurance Company making a valuation to determine the amount which it ought to have in hand as an Assurance Reserve Fund, retains no more than this amount, and gives away the surplus in the form of bonus, which from that moment becomes a liability that the

company must provide for. Every valuation and distribution of the profits of a company is, so to speak, the return of that company to a given starting point: consequently two companies making their valuations upon the same basis of calculation, will reserve assurance funds that must from the very nature of the case be relatively equal, and neither company will be stronger than the other.

When, therefore, one company has a reserve fund bearing a high proportion to the sums assured, and another company has a reserve fund bearing a less proportion, we may accept the fact as an indication of the measure of the liability in each company, but certainly not as an evidence that the one company is better able to meet its engagements than the other. For if the calculations of the values of the policies have been made in each case properly, the companies must necessarily be on an equality in this respect.

It is therefore perfectly clear that the comparison of the amount of the assurance fund with the amount assured cannot alone be taken as a criterion of excellence.

The elementary data upon which Diagram No. II. has been constructed are given in the Table on the following page.

TABLE II.—Showing the proportion of the Assurance Fund to the sums Assured of the undermentioned Companies, arranged, as in Table I., in the order of the supposed average period of the duration of the Risks, commencing with those of Short Duration, and showing the reserve that would be made at the supposed age of the policies by a valuation on the Carlisle 3 per cent. Table, assuming the average age at entry to be 36, and the assurance under the ordinary Whole Life Table.

Numerical order.	Company.	Sums Assured.	Assurance Fund.	Ratio of Assurance Fund to sums Assured.	Net Value Carlisle 3 per cent.
		£	£		
1	Pearl	233,575	2,174	0.93	3.65
2	British Workmen	117,450	—	—	3.20
3	Albion	225,331	832	0.37	3.15
4	Prudential	8,322,226	383,110	4.60	4.91
5	Masonic and General	81,536	—	— *	4.48
6	Scottish Commercial	146,208	10,028	6.86	5.85
7	Marine and General	730,200	253,074	34.66	7.16
8	London and Lancashire	930,292	67,747	7.28	7.16
9	Commercial Union	2,345,442	279,512	11.92*	8.96
10	Scottish Imperial	333,827	11,718	3.51	8.88
11	Western Counties	346,562	10,742	3.10	8.71
12	Sceptre	608,804	19,466	3.19	8.63
13	London and Birmingham	88,473	—	—	8.47
14	Law Union	1,709,262	255,580	14.95*	10.27
15	General	1,951,367	360,878	18.49	9.94
16	Reliance	2,075,408	301,965	14.55*	9.85
17	English and Scottish	3,414,725	655,872	19.21	11.66
18	Great Britain	1,905,025	112,869	5.93	11.34
19	Equity and Law	3,188,442	815,785	25.59	11.11
20	Gresham	9,755,400	1,531,615	15.70	10.86
21	Edinburgh	3,592,768	887,003	24.69	12.24
22	Queen	1,254,784	150,845	12.02	12.24
23	Scottish Provident	7,660,377	1,773,506	23.15	11.17
24	Scottish Provincial	3,830,000	621,605	16.23	14.26
25	British Equitable	2,930,210	235,986	8.05*	14.13
26	London and Provincial Law	2,629,858	514,079	19.55*	13.83
27	Westminster and General	1,320,513	316,565	23.97*	13.69
28	Crown	4,762,106	992,805	20.85	15.72
29	City of Glasgow	4,201,836	586,930	13.97*	15.39
30	Briton, Medical & General	6,669,877	570,723	8.56	15.13
31	Scottish Union	5,000,000	924,911	18.50	17.25
32	North British & Mercantile	9,740,523	2,146,256	22.03	17.07
33	British Empire	2,815,000	488,310	17.35*	17.02
34	London, Liverpool & Globe	7,317,176	1,921,941	26.27	16.96
35	Scottish Widows	16,600,000	5,100,033	30.72	16.78
36	Sovereign	2,208,116	301,355	13.65	18.88
37	Royal	6,753,230	1,283,087	19.00	18.78
38	Universal	3,225,068	610,185	18.92	18.73
39	Alliance	3,227,249	901,888	27.95	20.70
40	Provident Clerks	2,315,245	492,870	21.29*	20.47
41	Scottish Amicable	5,660,046	1,302,313	23.01	20.43
42	Legal and General	4,304,159	1,487,698	34.57*	22.35
43	Star	4,782,189	940,034	19.66	22.22
44	Standard	16,912,296	3,617,935	21.39	22.22
45	Clergy Mutual	5,211,430	1,953,695	37.49	24.41
46	University	2,246,143	888,021	39.54	24.34
47	Scottish Equitable	6,892,581	1,952,711	28.23	24.26
48	Northern	3,861,344	856,094	22.12	24.17
49	Rock	5,143,759	1,839,938	35.77	26.39
50	Provident	4,857,279	1,718,831	35.39	26.11
51	Clerical Medical	5,797,030	1,810,557	31.23	26.11
52	West of England	3,634,936	1,061,348	29.20	28.38
53	London Life	7,719,030	3,127,127	40.51	32.38
54	National Provident	10,112,650	3,060,502	30.21	34.37
55	Metropolitan	4,193,057	1,357,454	32.37	34.37
56	Economic	8,890,169	2,715,207	30.54	36.51
57	Equitable	7,516,520	4,051,873	53.91*	36.44
58	Mutual	2,457,107	737,444	30.01	36.35
59	National	1,308,640	602,098	46.01*	38.56
60	Eagle	11,869,543	2,861,508	24.11	50.29
61	Law	10,452,948	4,406,152	42.15	52.17

* These Companies have combined the Annuity Fund with the Assurance Fund.

CHAPTER V.

I've spent thus much, and have in store
A certain sum—I want no more.
ANON.

THE amount of the assurance fund being alone no criterion by which the completeness of the fund may be judged, let us now compare it with the amount of the premiums received.

It must be remembered that the reserve made for policies of assurance is the offspring of the premiums, for it is composed of that portion of the premiums which is not spent for the payment of early claims or expenses of management, therefore it would be natural to look in that direction for the rough and ready test so much desired of the adequacy of the assurance fund. And in truth the amount of premium received by the company for the policies in force constitutes the best gauge of the sufficiency of the reserve that the current engagements require.

But strange as it may appear, the only rational rough and ready test that might be applied with advantage, and such is the one just mentioned, is overlooked in the Schedules of the Life Assurance Act, 1870, so far as the ordinary Whole Life policies are concerned, which constitute by far the greatest amount of the assurance risks of every Life Assurance Company.

True it is that elements are supplied in the returns to the Board of Trade regarding the ordinary Whole Life assurances, by which an actuary may work out a rough valuation, and test the company's calculations by it; but the general public cannot do this. It would be an advantage to the public if the law were amended

so as to require a statement of the amount of premium received by the company for the ordinary Whole Life policies. But since, at present, we have not such a statement, our enquiry as to the relation of the assurance funds to the amount of the premiums received cannot be pursued with reference to the ordinary Whole Life assurances, and we are fain to be satisfied with the classes respecting which the information is supplied, namely the classes of Endowment assurances and Endowments.

It will be seen by the following Diagram, No. III., that this form of assurance, which is not of very old date, is not adopted by all the companies to any considerable extent. I have not introduced into this diagram any companies whose transactions in Endowments and Endowment assurances do not amount to £20,000 of sums assured. Of the companies that have business exceeding that amount there are only 34. They are arranged in the order of the ratio of the reserve made to the amount of the premiums received.

It will be observed, that with the exception of the companies numbered 1, 2 and 3, the ratio of the assurance fund to the amount of premiums received ranges from 60 per cent., to even an amount in excess of the premium received for the assurance risks in force.

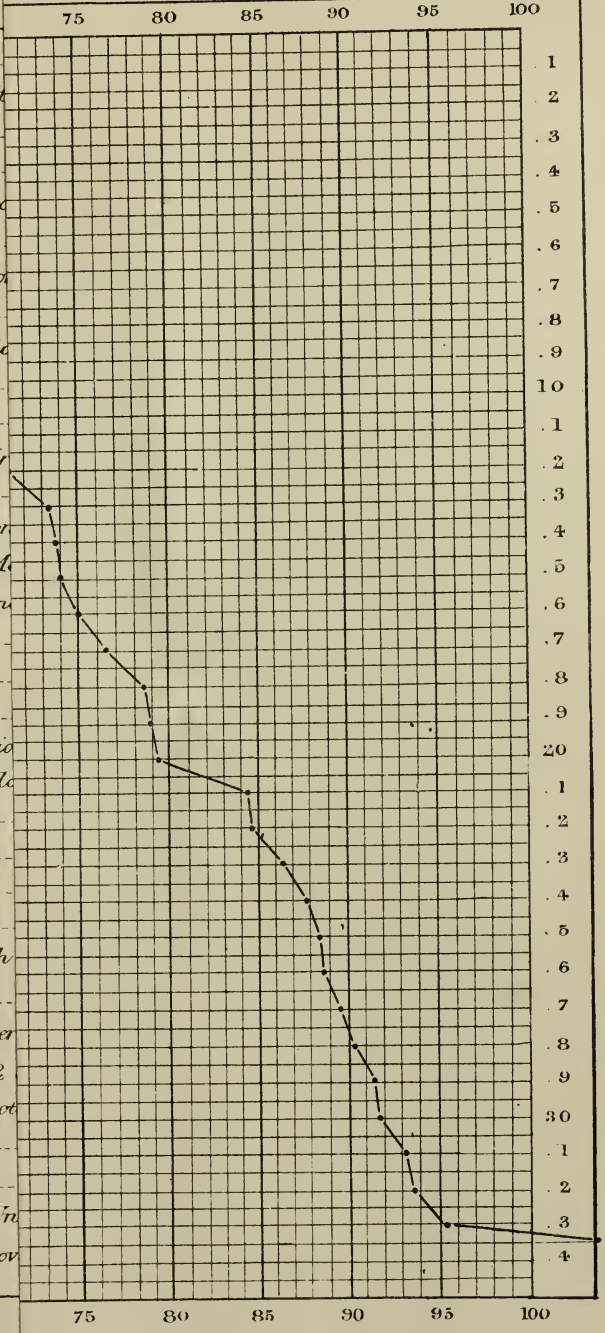
The general character of the line showing the ratio of the assurance funds to the amount of the premium received (averaging from two-thirds to the entire amount) is not suggestive of weakness, but of strength. As before, a table of elementary data is given.

TABLE III.—Endowments and Endowment Assurances. Showing the average duration of the Policies, the Ratio of the Reserve to the Sums assured, and also the Ratio of the Reserve to the amount of Premiums received.

Tabular Number.	Company.	Sums Assured.	Yearly Premium Income.	Amount of Premium received.	Average duration of Risks.	Reserve.	Ratios of Reserve to	
							Sums Assured.	Premiums received.
		£	£	£	Years.	£		
1	Whittington	93,144	3,483	16,875	4.85	5,341	5.7	31.7
2	British Equitable	823,212	30,326	223,378	7.4	99,243	12.1	44.4
3	Law	21,311	803	6,991	8.7	3,830	18.0	54.8
4	Provident	38,303	1,666	5,398	3.2	3,247	8.5	60.2
5	Life Association, Scotland	203,350	8,774	71,331	8.1	43,245	21.3	60.6
6	Sun	42,150	1,581	7,530	4.8	4,588	10.9	60.9
7	Norwich Union	42,781	1,740	14,881	8.6	9,294	21.7	62.5
8	Reliance	97,199	3,590	17,799	5.0	11,598	11.9	65.2
9	West of England	33,423	1,423	14,971	10.5	9,930	29.7	66.3
10	Crown	41,252	1,560	10,819	6.9	7,449	18.1	68.9
11	Planet	23,950	1,015	3,253	3.2	2,261	9.4	69.5
12	British Empire	146,444	5,887	44,735	7.6	31,710	21.7	70.9
13	Caledonian	35,900	1,394	8,975	6.4	6,576	18.3	73.3
14	Scottish Union	93,469	4,016	28,979	7.2	21,371	22.9	73.8
15	Clerical and Medical	20,100	840	3,091	3.7	2,281	11.4	73.8
16	Scottish Provincial	235,160	9,277	61,876	6.7	46,412	19.7	75.0
17	Edinburgh	87,288	3,437	18,070	5.3	13,831	15.9	76.5
18	General	131,300	5,189	32,693	6.3	25,739	19.6	78.7
19	Prudential	92,715	4,064	18,728	4.6	14,796	16.0	79.0
20	Scottish National	114,280	4,188	26,080	6.2	20,742	18.2	79.5
21	United Kingdom	643,989	26,001	258,644	10.0	218,227	33.9	84.4
22	Union	30,864	1,451	11,635	8.0	9,852	31.9	84.7
23	Gresham	2,821,048	128.903	1,101,733	8.6	950,507	33.7	86.3
24	Royal	312,012	12,964	89,063	6.9	78,034	25 0	87.6
25	Eagle	256,216	9,632	136,769	14.2	120,914	47.2	88.4
26	North British & Mercantile	184,865	8,128	64,654	8.0	57,207	30.9	88.5
27	Standard	88,279	3,562	29,161	8.2	26,123	29.6	89.6
28	Provident Clerks	36,191	1,564	11,893	7.6	10,724	29.6	90.2
29	Westminster & General	59,595	2,243	21,812	9.7	19,886	33.4	91.2
30	English and Scottish	84,271	3,434	21,721	6.3	19,883	23.6	91.5
31	Northern	191,211	7,311	59,864	8.2	55,716	29.1	93.1
32	Provincial	63,989	2,890	21,913	7.6	20,486	32.0	93.5
33	Commercial Union	68,489	3,801	21,510	5.7	20,458	29.9	95.1
34	National Provident	402,702	16,994	146,570	8.6	151,993	37.7	103.7

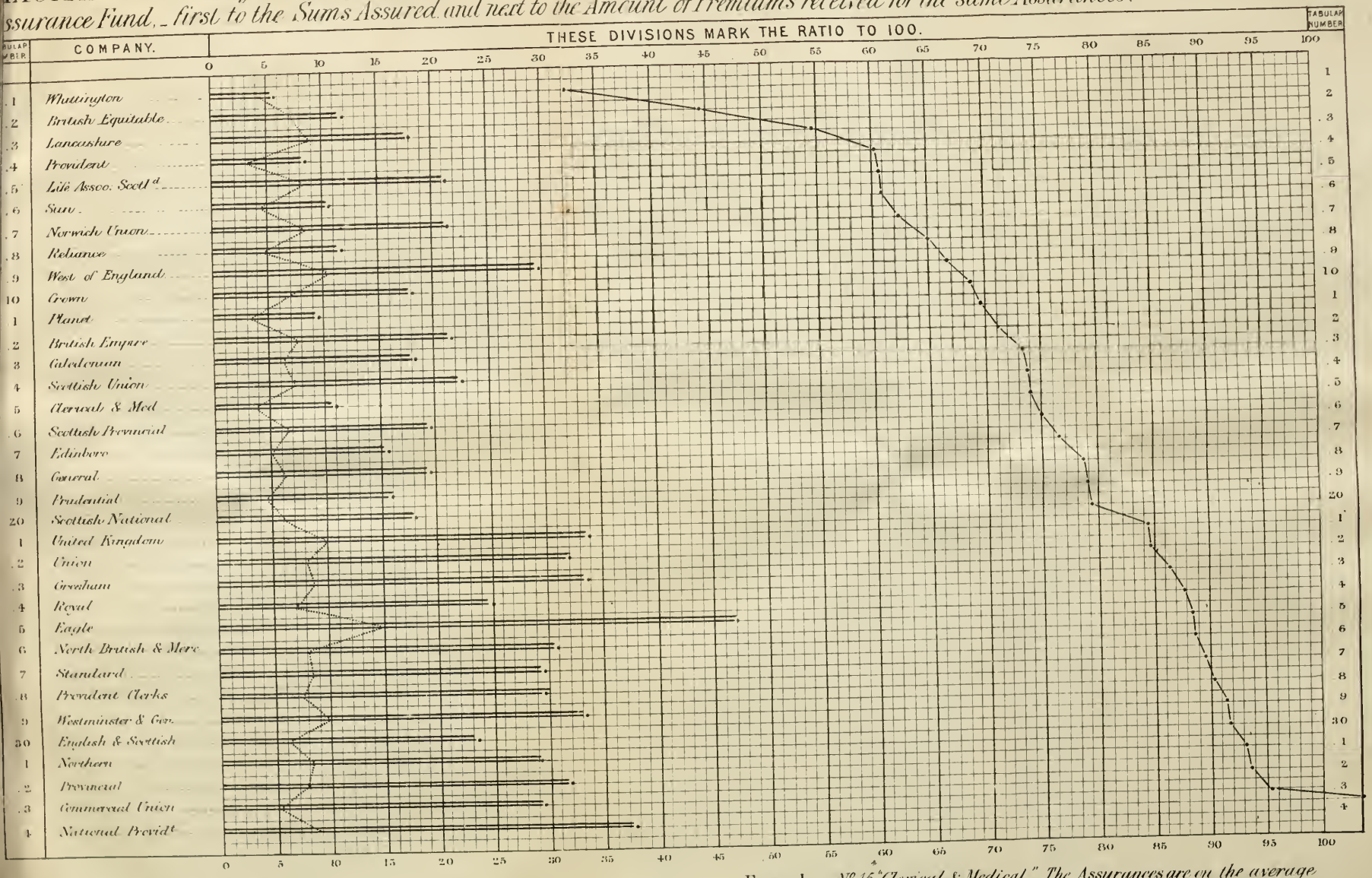
DIAGRAM I. *urances and the Ratio of the Issurance Fun ne Assurances.*

TABULAR NUMBER.	COMPA	TABULAR NUMBER
.1	Whittington	1
.2	British Equit	2
.3	Lancastaire	3
.4	Provident	4
.5	Life Assoc: Sc	5
.6	Sun	6
.7	Norwich Unio	7
.8	Reliance	8
.9	West of Engl	9
10	Crown	10
.1	Planet	1
.2	British Empi	2
.3	Caledonian	3
.4	Scottish Unio	4
.5	Clerical & M	5
.6	Scottish Provn	6
.7	Edinboro	7
.8	General	8
.9	Prudential	9
20	Scottish Natio	20
.1	United Kingdo	1
.2	Union	2
.3	Gresham	3
.4	Royal	4
.5	Eagle	5
.6	North British	6
.7	Standard	7
.8	Provident Cle	8
.9	Westminster &	9
30	English & Scot	30
.1	Northern	1
.2	Provincial	2
.3	Commercial Un	3
.4	National Prov	4



Average Duration cal." The Assurances are on the average Ratio of the Assurances of the Assurance Fund to the Sums to the Sums while the Ratio of the Reserve to the Ratio of the Assurand is nearly 74 per Cent. to Premiums.

LAGRAM III. *Showing the average duration of the Policies for Endowments and Endowment Assurances and the Ratio of the ssurance Fund,- first to the Sums Assured and next to the Amount of Premiums received for the same Assurances.*



Average Duration of the Policies .....
Ratio of the Assurance Fund to the Sums Assured ——
Ratio of the Assurance Fund to Premiums Received —·—·—

Example - *No 15 "Clerical & Medical." The Assurances are on the average not 4 year old yet the Rates of the Assurance Fund to the Sums Assured is 11½ per Cent while the Ratio of the Reserve to the Amount of Premiums paid is nearly 74 per Cent.*

CHAPTER VI.

Like leaves on trees the race of man is found,
Now green in youth, now with'ring on the ground.
DRYDEN.

THE time must come when those who climb a mountain come down again, they cannot always remain on the summit. Nations rise and decline, and such must be the history of Life Assurance Offices. In early years they progress and continue to increase, until the effect of natural waste establishes an equilibrium with the recuperative power. The tendency to decadence and final extinction can only be delayed by the introduction of new business to replace that which goes away. Several companies have in their days preferred to shut their doors against new business, and have applied themselves to work-out what they had, not from necessity but from choice: probably the best that could be done in the interests of the policy-holders, they being injured in nowise by the exclusion of new risks. The old Westminster closed its doors for many years against new business. The company continued to receive the premiums, and settled the claims as they arose: subsequently they made arrangements with the "Provident" to undertake the liquidation of the policies remaining in force, of which probably there are very few at the present day.

If a company does not put forth sufficient energy in the management of affairs to replace by new policies those which go out, the inevitable consequence is that the company must decline.

It will be remembered that the companies of the old school are those chiefly who will not expend money for the acquisition of new business; we may therefore expect to find that they will be amongst the companies going down the hill.

The returns to the Board of Trade enable me to place this matter distinctly before my readers.

I have consulted the accounts of 73 companies, and have ascertained their receipts from premiums and interest during a period of three years. I have compared the amount of the assurance fund at the beginning of the period with what it was at the end, and thereupon I have calculated the ratio of increase or of decrease as the case may be to the receipts.

My readers will observe in Diagram No. IV. that 66 of the companies have added to their funds existing at the commencement of the period (the largest increase being $53\frac{3}{4}$ per cent. of the receipts, and the smallest addition being 5 per cent. only), and that 7 companies have had recourse to their reserves to meet the growing claims upon them, the least decrease being $2\frac{2}{3}$ per cent., and the highest being as much as $46\frac{1}{4}$ per cent. of the income.

Those companies whose assurance funds are on the rise, are arranged in the order of the ratio of *increase* of funds to the receipts. Those companies who have had to realise investments, have been arranged in the order of the ratio of the *decrease* of their funds.

This Diagram indicates most plainly the high recuperative power of the Commercial Union, for its assurance fund has been increased by more than one-half of its income; and the declining power of the "Equitable," whose requirements for claims upon its resources have exceeded its incoming monies

by nearly half as much more. The Commercial Union is a modern office going with the times. The Equitable is more than a century old, and apparently does not make any effort to keep pace with others.

Table IV. contains the elementary data on which the corresponding diagram has been made.

TABLE IV.—Showing the Ratio of *Increase* of the Assurance Funds of some Companies to the Receipts from Premium and Interest, and the *Decline* of the Assurance Funds of other Companies compared with their Income.

Tabular Number.	Company.	Years of Account.	Premium and Interest received.	Assurance Fund increased.	Ratio of Increase to Receipts.	Average Age of Assurances according to Table I.
	ASSURANCE FUNDS ON THE RISE.		£	£		
1	Commercial Union	1870-72	235,383	126,565	53.77	5.1
2	Equity and Law	,,	404,180	216,461	53.56	7.6
3	United Kingdom Temperance	,,	717,855	362,617	50.51	*
4	Northern	,,	467,638	231,114	49.42	15.8
5	Scottish Provident	,,	854,107	420,409	49.22	8.9
6	Provident Clerks	,,	266,917	131,228	49.16	13.5
7	Queen	,,	136,270	59,096	43.37	8.8
8	Scottish Provincial	1871-73	316,486	136,915	43.26	9.2
9	Lancashire	1870-72	148,240	59,687	40.26	*
10	Law Union	,,	181,238	72,538	40.02	6.1
11	Royal	,,	833,516	325,596	39.06	12.3
12	City of Glasgow	1871-73	409,354	153,737	37.56	10.6
13	Clergy Mutual	,,	685,635	252,779	36.87	15.2
14	British Equitable	1870-72	303,392	110,133	36.30	9.3
15	Scottish Amicable	,,	651,563	231,874	35.59	13.6
16	Hand-in-Hand	,,	551,936	196,385	35.58	*
17	Liverpool, London and Globe	,,	914,356	306,161	33.48	11.5
18	Gresham	1871-73	1,290,622	423,469	32.81	7.8
19	Star	1870-72	546,208	178,174	32.62	14.8
20	Caledonian	1871-73	192,513	61,969	32.19	*
21	London and Lancashire	1870-72	98,297	31,309	31.85	4.6
22	Scottish National	1871-73	270,455	85,783	31.72	*
23	Church of England	,,	287,912	86,701	30.11	*
24	Edinburgh	1871-73	478,971	142,049	29.66	8.8
25	Provincial	1870-72	122,480	36,104	29.48	*
26	Scottish Widows	,,	1,981,835	582,056	29.37	11.8
27	Yorkshire	1871-73	158,715	45,182	28.47	*
28	Union	,,	346,663	98,033	28.28	*

* These Companies not having stated their new Premium Income, no idea can be formed of the average age of their Policies.

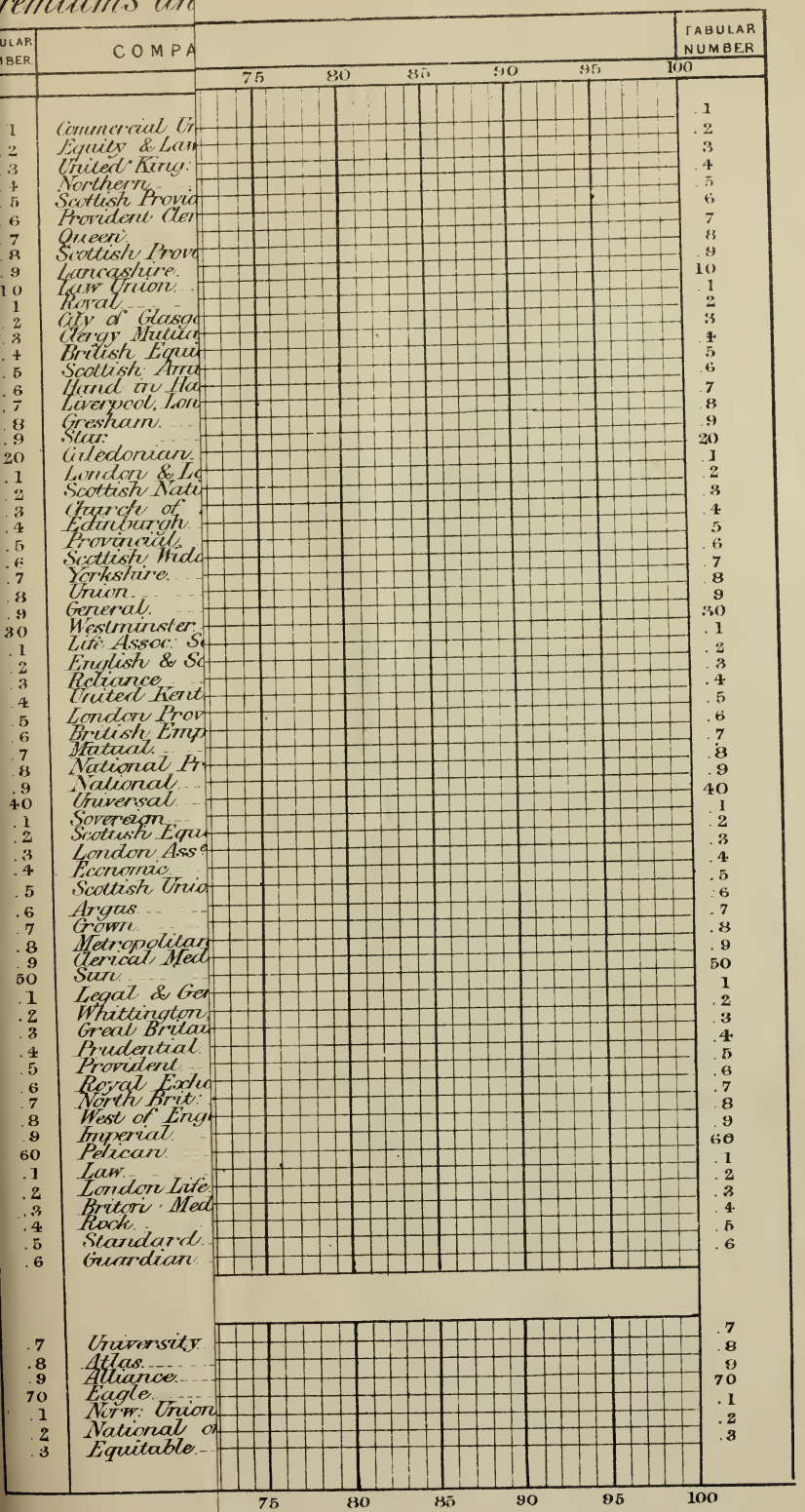
TABLE IV.—*Continued.*

Tabular Number.	Company.	Years of Account.	Premium and Interest received.	Assurance Fund increased.	Ratio of Increase to Receipts.	Average Age of Assurances according to Table I.
	ASSURANCE FUNDS ON THE RISE.		£	£		
29	General	1870-72	244,426	69,062	28.25	6.4
30	Westminster and General	,,	157,983	44,498	28.17	9.8
31	Life Association of Scotland	1871-73	918,442	257,988	28.09	*
32	English and Scottish	1870-72	426,334	118,242	27.73	7.0
33	Reliance	,,	230,077	61,602	26.77	6.5
34	United Kent	1871-73	126,391	32,065	25.37	*
35	London and Provincial Law	1870-72	324,952	81,649	25.13	9.7
36	British Empire	,,	306,068	75.901	24.80	11.5
37	Mutual	,,	320,179	79,380	24.79	21.8
38	National Provident	,,	1,068,170	257,564	24.11	20.4
39	National	,,	283,395	66,180	23.35	22.2
40	Universal	,,	484,261	112,815	23.30	12.4
41	Sovereign	,,	271,069	63,028	23.25	12.2
42	Scottish Equitable		785,139	176,857	22.53	15.6
43	London Assur. Corporation	,,	634,736	144,011	22.69	*
44	Economic	,,	1,006,093	211,411	21.01	21.2
45	Scottish Union	1871-73	549,710	114,797	20.88	10.2
46	Argus	1870-72	179,458	36,349	20.25	†
47	Crown	1871-73	530,111	104,453	19.70	11.2
48	Metropolitan	,,	584,509	106,516	18.22	20.4
49	Clerical and Medical	,,	733,125	128,823	17.57	16.9
50	Sun	,,	583,687	102,248	17.52	*
51	Legal and General	1870-72	597,789	103,142	17.25	14.5
52	Whittington	1871-73	83,545	14,254	17.06	*
53	Great Britain	1870-72	187,562	27,065	14.43	7.3
54	Prudential	,,	1,012,121	130,467	12.89	2.1
55	Provident	,,	695,344	87,418	12.57	16.9
56	Royal Exchange	1871-73	643,946	79,100	12.28	*
57	North British and Mercantile	1870-72	1,115,675	135,275	12.12	11.4
58	West of England	,,	513,468	59,191	11.53	17.
59	Imperial		380,815	42,093	11.05	*
60	Pelican	1870-72	432,257	43,626	10.09	*
61	Law	,,	1,514,878	131,153	8.66	30.4
62	London Life	1871-73	1,231,134	104,020	8.45	19.1
63	Briton, Medical, &c	1870-72	741,016	53,629	7.24	10.9
64	Rock	,,	851,385	56,614	6.65	16.1
65	Standard	,,	2,078,840	135,470	6.52	14.8
66	Guardian		565,696	27,952	4.94	*
	ASSURANCE FUNDS ON THE FALL.					
67	University	1871-73	293,514	7,785	2.65	15.3
68	Atlas	1870-72	495,537	34,558	6.97	*
69	Alliance	,,	400,816	33,470	8.35	13.0
70	Eagle	1871-73	1,279,263	141,587	11.07	29.6
71	Norwich Union	1870-72	825,239	110,371	13.37	*
72	National, Ireland	1871-73	62,038	9,581	15.44	*
73	Equitable	1870-72	979,244	457,803	46.75	21.4

* These Companies not having stated their new Premium Income, no idea can be formed of the average age of their Policies.

† This Company does not transact any new business.

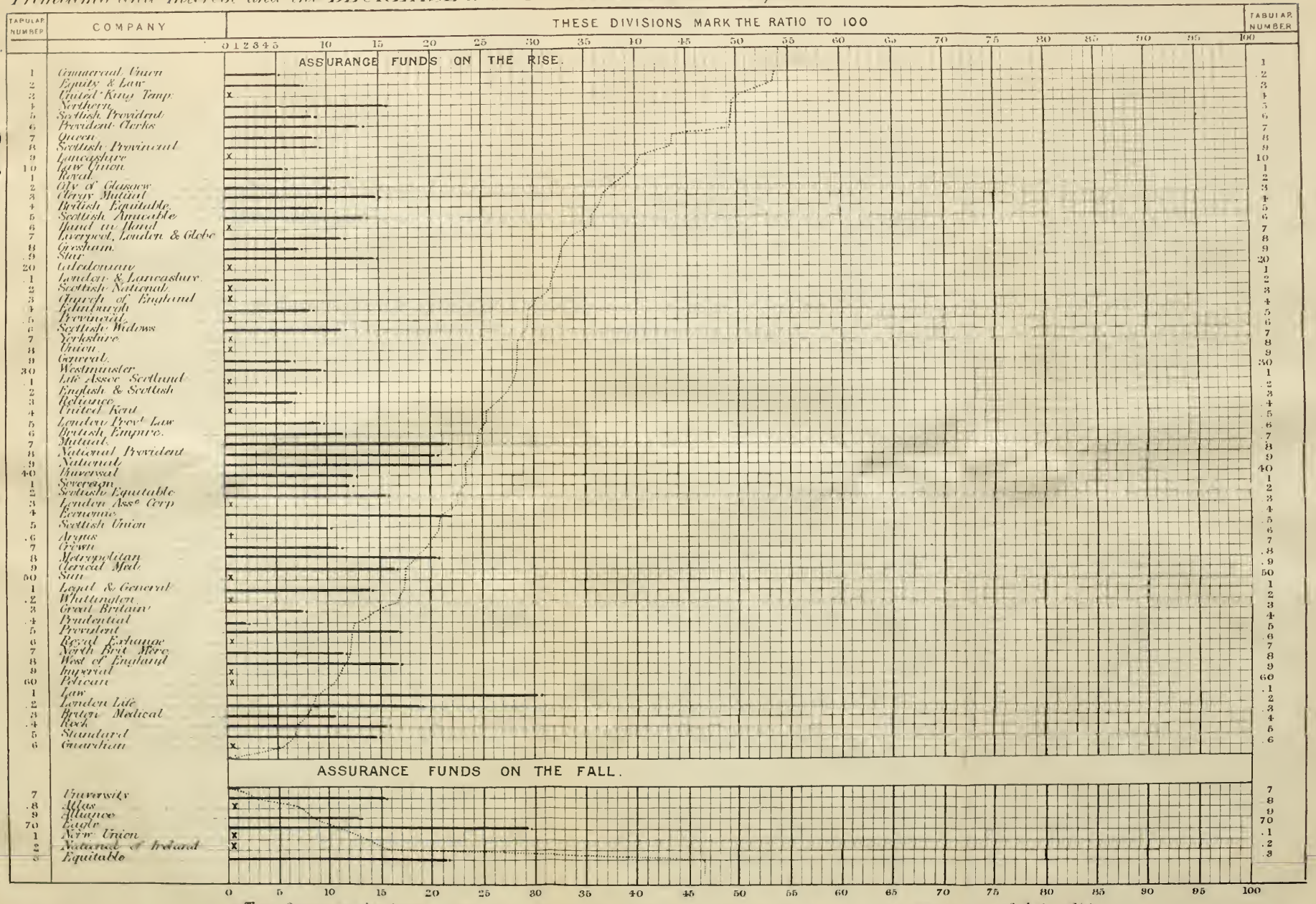
DIAGRAM *compared with the Income from Premiums an*



age of their policies

The Oblique Line in *The average age of the Assurances is about 5 years*
of their Assuran *of the Assurance Fund is more than 53 per Cent*
The Thick Horizontal *ans and Interest*

DIAGRAM IV. *Shewing the Ratio of INCREASE of the Assurance Funds of 66 Companies compared with the Income from Premiums and Interest and the DECREASE of the Assurance Funds of 7 Companies.*



x *Those Companies not having stated their new premium income no idea can be formed of the average age of their policies*

\+ *This Company has ceased to transact new business.*

The Oblique Line indicates (reach Company the per Centage of the Increase (or Decrease) of their Assurance Funds compared with the Income from Premiums & Interest

The Thick Horizontal Lines _____ *indicates the supposed average age of the Polices*

Example. *N°1 The Commercial Union The average age of the Assurances is about 5 years and the Ratio of the increase of the Assurance Fund is more than 53 per Cent of the Receipts from Premiums and Interest*

CHAPTER VII.

"I will think nothing to any purpose that the world can say against it . . . . and this is my conclusion."—SHAKSPEARE.

THE four preceding chapters present the subject to the reader under some of its principal aspects. The whole question has many sides, and it must be quite obvious to an impartial mind how easily a fallacy may flourish upon a fact if only one side of the case be considered.

The only complete test of the position of a company is to be found in a regular valuation of the policies, and a knowledge of the internal economy of the office.

Short of this an estimate may be attempted by considering proportions and results carefully, not from one point of view only but from many. One fundamental element in particular must never be lost sight of, and that is the average duration of the assurance risks. The whole case turns upon this point.

Comparison between one company and another can never be satisfactory, because there are no two companies sufficiently alike in all important points to allow of fair comparison. Therefore examine; but do not compare.

Two companies cannot differ materially in their relative strength, after suitable valuation of the assurance risks and the distribution of what upon the valuation was ascertained to be surplus. For both companies would retain only what was needful, therefore they would be reduced to relative equality.

Our Life Assurance Offices are for the most part in a healthy sound condition, and merit the confidence

of the assured. If any writers upon the subject have ventured to alarm the assured by instilling doubt into their minds, such writers will have their own reward.

The principle of our English law is that a man is presumed to be innocent unless the contrary is proved, and it is to my mind an unwarrantable departure from that principle to write down any assurance office upon mere assumption.

I will conclude by putting four questions indicating the direction in which the matter may with advantage be considered:—

1. What trader will object to liberal outlay, if it secures profit?

2. Is Company A (having a higher reserve fund than B) better than Company B, if the liabilities of A require such higher reserve?

3. If a premium be the measure of a risk, is not the amount of premiums received the measure of the reserve required?

4. If Companies, spending liberally and paying all claims out of income, build up an Assurance Fund increasing in amount, are not such Companies at least as good financially as others spending little, but obliged to realise invested funds in order to meet the claims falling due?

Believe not each aspersing tongue,
As some weak people do;
But always think that story wrong
Which ought not to be true.

F. ALLAN CURTIS, F.I.A.

LONDON, 29*th March*, 1875.

INDEX TO THE COMPANIES MENTIONED IN THE DIAGRAMS AND TABLES.

Company.	Established.	Numerical order of the Companies in the Diagrams and Tables.			
		I.	II.	III.	IV.
Albion		3	3	—	—
Alliance	1820	39	39	—	69
Argus	1833	—	—	—	46
Atlas	1808	—	—	—	68
British Empire	1847	33	33	12	36
British Equitable	1854	25	25	2	14
British Workman	1866	2	2	—	—
Briton Medical and General	1854	30	30	—	63
Caledonian	1833	—	—	13	20
Church of England	1840	—	—	—	23
City of Glasgow	1838	29	29	—	12
Clergy Mutual	1829	45	45	—	13
Clerical Medical	1824	51	51	15	49
Commercial Union	1861	9	9	33	1
Crown	1825	28	28	10	47
Eagle	1807	60	60	25	70
Economic	1823	56	56	—	44
Edinburgh	1823	21	21	17	24
English and Scottish	1839	17	17	30	32
Equitable	1762	57	57	—	73
Equity and Law	1844	19	19	—	2
General	1836	15	15	18	29
Great Britain	1844	18	18	—	53
Gresham	1848	20	20	23	18
Guardian	1821	—	—	—	66
Hand in Hand	1836	—	—	—	16
Imperial	1820	—	—	—	59
Lancashire	1852	—	—	—	9
Law	1823	61	61	3	61
Law Union	1854	14	14	—	10
Legal and General	1836	42	42	—	51
Life Association of Scotland	1838	—	—	5	31
Liverpool, London and Globe	1836	34	34	—	17
London Assurance Corporation	1721	—	—	—	43
London and Birmingham	1870	13	13	—	—
London and Lancashire	1862	8	8	—	21
London Life	1806	53	53	—	62
London Provincial Law	1846	26	26	—	35
Marine and General	1852	7	7	—	—
Masonic and General	1868	5	5	—	—
Metropolitan	1835	55	55	—	48
Mutual	1834	58	58	—	37
National of Ireland	1822	—	—	—	72
National Life	1830	59	59	—	39
National Provident	1835	54	54	34	38
North British and Mercantile	1823	32	32	26	57
Northern	1836	48	48	31	4
Norwich Union	1808	—	—	7	71
Pearl	1864	1	1	—	—
Pelican	1797	—	—	—	60

Company.	Established.	Numerical order of the Companies in the Diagrams and Tables.			
		I.	II.	III.	IV.
Planet (Citizen)	1866	—	—	11	—
Provident	1806	50	50	4	55
Provident Clerks'	1840	40	40	28	6
Provincial	1852	—	—	32	25
Prudential	1848	4	4	19	54
Queen	1857	22	22	—	7
Reliance	1840	16	16	8	33
Rock	1806	49	49	—	64
Royal	1845	37	37	24	11
Royal Exchange	1721	—	—	—	56
Sceptre	1864	12	12	—	—
Scottish Amicable	1826	41	41	—	15
Scottish Commercial	1866	6	6	—	—
Scottish Equitable	1831	47	47	—	42
Scottish Imperial	1865	10	10	—	—
Scottish National	1843	—	—	20	22
Scottish Provident	1837	23	23	—	5
Scottish Provincial	1825	24	24	16	8
Scottish Union	1824	31	31	14	45
Scottish Widows'	1815	35	35	—	26
Sovereign	1845	36	36	—	41
Standard	1825	44	44	27	65
Star	1843	43	43	—	19
Sun	1810	—	—	6	50
Union	1812	—	—	22	28
United Kent	1824	—	—	—	34
United Kingdom	1866	—	—	21	—
United Temperance	1840	—	—	—	3
Universal	1834	38	38	—	40
University	1825	46	46	—	67
West of England	1807	52	52	9	58
Western Counties	1861	11	11	—	—
Westminster and General	1836	27	27	29	30
Whittington	1855	—	—	1	52
Yorkshire	1824	—	—	—	27

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